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ABSTRACT

The final report provides a detailed description of the development of the Peabody Mobility Kit for Infants, which provides programmed instruction in orientation and mobility for multiply impaired blind infants. It describes the development of the criterion referenced assessment scales and instructional activities, the empirical validation of the materials via field testing, and the dissemination activities of the 1-year project. Cognitive, motor, and sensory curricular areas were emphasized due to their importance in achieving independent mobility skills. Results of the field testing with 22 infants in both home and center settings found statistically significant gains achieved in the cognitive and movement/touch areas but not in the motor and sound localization areas. Both home and center settings were effective though a greater variability of gain scores was found within the home condition. Appendices, which make up more than two-thirds of the report, contain the biweekly report form, the user questionnaire, the motor consultants' questionnaire, a sample scale scoresheet, a sample training data record form, a list of project consultants, sample assessment items, and sample training items. (DB)

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Final Report

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The Development of a Program in Orientation and Mobility for Multi-Handicapped Blind Infants (Peabody Mobility Kit for Infants)

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Introduction

The Peabody Mobility Kit for Infants was developed to provide reliable, valid assessment and training materials in orientation and mobility for use primarily by parents and teachers of multiply impaired blind infants and young children. The preparation of these materials followed the completion of two similar projects at George Peabody College for Teachers, one which resulted in the development of instructional material in orientation and mobility for preschool blind children (Harley & Wood, 1980), and the other designed to meet the instructional needs of preschool children with low vision (Harley, Merbler & Pupke, 1978). Both the present project and the two earlier projects were geared toward assisting children in acquiring skills which were believed to have a direct impact on their ability to move safely and efficiently in a variety of environments.

The ability to move about safely and efficiently is an integral component in a child's overall development, and is likely to impact later social, educational, and physical competence (Foulke, 1970). The basic components of such ability, collectively referred to as orientation and mobility, involve a

complex set of interrelated tasks. Included in this set are locomotor skills leading up to and including independent walking, along with the cognitive and sensory ability to acquire and efficiently use information gained from the environment to maintain one's orientation in space. The Peabody Mobility Kit for Infants, like its earlier counterparts, was predicated on the belief that the basic skills which lead to independent mobility could be systematically assessed and trained by parents, teachers, and other persons involved with guiding the development of young children toward independence. The primary difference between the present study and the two earlier projects was the developmental age of the children for which the material was targeted. The earlier studies developed assessment and training material for children with a developmental age of from approximately two to six years. The present effort extended downward the age range to include children from zero to two* years of age.

This report provides a detailed description of the events and activities of the project to develop programmed instruction in orientation and mobility for multiply impaired blind infants. It describes the

NOTE: One child in the sample of 22 children was 29 months developmental age

development of the assessment scales and the programmed instruction, the empirical validation of the materials via field testing, and the dissemination activities undertaken during this one year project.

Review of the Literature

Review of the rather sparse literature in orientation and mobility for infants and preschoolers reveals that there is some consensus among professionals about the importance of early intervention with young multiply impaired blind children, and the skills considered important for development of independent movement. Several encouraging efforts have been made in describing procedures for training children in such skills. In regard to the importance of intervention, Felix and Spungin (1978), in a national survey of preschool services for visually handicapped children, noted that most professionals believe that intervention programs should include such skills as visual efficiency, visual motor integration, body awareness, spatial orientation, socialization, self-concept, auditory discrimination, self-help skills, and cognitive development.

Teachers and parents of young visually impaired children have benefitted from several useful

intervention programs which have been developed for use with preschools. These programs include Alive, Aware, A Person (O'Brien, 1976), Vision-Up (Craft and Robinson, 1975), Look at Me (Smith and Cote, 1982) and the Functional Vision Inventory (Langley, 1980). Such resources are helpful in identifying key skill areas in early development, and serve to guide assessment and training of young visually impaired children. While each of these intervention programs provide training activities for skills which are logically related to the development of travel competence, none of them are devoted specifically to orientation and mobility. Mori and Olive (1978) also provided suggestions for an infancy intervention program in orientation and mobility related skills, such as gross motor, sensory, cognitive, and fine motor activities.

In regard to the study of skill acquisition directly related to orientation and mobility, Moore (1970) found that short term instruction was effective in developing orientation, mobility, social competency, and body awareness skills in preschool multiply impaired children. Case studies by Seelye and Thomas (1966) indicate that orientation and mobility

instruction can improve the ability of multiply impaired children to move in their environment.

Although a few programs have been reported in the literature regarding orientation and mobility and daily living skills training for multiply impaired blind infants, very little research has been conducted to discover the most effective methods of teaching these skills. Fraiberg (1977) noted the prolonged period of immobility during the first year of life of the young blind child. It was not until late in the first year of development that the child reached for an object on sound cue alone. This resulting immobility posed a serious problem by limiting the ability to explore and discover objects in the environment. Adelson & Fraiberg (1976), suggested that an intervention program based upon integrating sound and touch experience may prove most effective in decreasing this early immobility, by facilitating children's movement in space. Intervention programs could be integrated into various aspects of the child-parent relationship and also in the play experiences offered to the child.

Bourgeault, Harley, DuBose, and Langley (1977) described an assessment program for severely handicapped blind children which included a diagnostic

team approach with special educators, psychologists and pediatric, orthopedic, or ophthalmological personnel as needed. The assessment process included parent intervention, measurement of mental abilities, and a detailed educational prescriptive program in the areas of motor, language, cognitive-adaptive, and social self-care skills. Reassessment occurred after six months to assist in evaluating the impact of developmental training.

Harley, Wood and Merbler (1980) devised a scale for the assessment of orientation and mobility skills in multiply impaired blind children with a developmental age of two to six years. The scale was subdivided into subscales in four basic areas: locomotor, sensory, concept, and orientation and mobility skills. Programmed instruction was developed for each of these basic areas. The programmed instruction was field tested in a study involving nine teachers of multiply impaired children during a 16-week period. The results showed that a group of 18 multiply impaired blind children made significant gains in performance as measured by pre/post assessment. In a follow-up study, Harley and Merbler (1980) developed programmed instruction in orientation and mobility for

multiply impaired low vision children. As in the earlier work, scales were developed for each of four major areas--motor development, sensory training, concept development, and mobility skills--and programmed instruction was developed for each of the scale items. The programmed instruction was validated with 44 multiply impaired low vision children in nine facilities in a 16-week field test. The experimental group, who received instruction using the programmed instructional materials demonstrated significant overall performance gains over a control group, who received only their usual programming.

Method

Overview

The purpose of the present study was to develop, refine, and validate an assessment and programmed intervention system which could be used to facilitate the development of orientation and mobility skills in multiply impaired blind children 0 - 2 years of age. Based on the review of literature and input from early childhood educators and orientation and mobility specialists, three major curricular areas were selected to be addressed in the materials. These areas,

cognitive, motor, and sensory development, were selected because they appeared to be most critical for the development of independent movement in young multiply impaired children. Sensory development was divided into two subcomponents, with one devoted to assessing and training awareness and localization of sound and the other relating to movement and touch.

By further surveying the literature and existing developmental scales and by consulting a panel of experts, key skills to be assessed and trained were identified in each of these three areas. Project staff began developing an assessment instrument by arranging the identified skills in a sequence which approximated that of a normal developmental sequence, and writing procedures for assessing whether or not children demonstrated these skills. The result of this effort was a list of behaviors, (15 motor, 19 cognitive, 15 movement and touch, and 10 awareness and localization of sound) which were deemed by project staff, consultants, and the project advisory committee to be critical for development of independent movement behavior. Each behavior was specified in the criterion referenced assessment scale, along with materials needed to assess the behavior, the procedure for

conducting the assessment, the criterion for scoring the behavior as present, emerging or absent, and the scoring procedure. Behaviors which the child was physically incapable of performing were scored not applicable (NA). Behaviors assessed in each area such as rolling, reaching to sound, and moving to obtain a toy are listed in Table 1.

The programmed instruction or training activities were developed after the assessment scales were completed. Each item on the cognitive, motor, and sensory scales had a corresponding item in the training or programmed instruction materials. The training activities provided a beginning point for instruction after the child's present level of functioning had been determined via the assessment.

The training items which were sequenced developmentally, facilitated the child's progress from the entry point of the program to the terminal objective. The terminal objective was the behavioral criterion specified for the highest (i.e., most developmentally advanced) item in each training area. Each step of the training (i.e., each item) had three levels, which were ordered by the level of prompt provided to the child. Training on any given step was

Table 1

Behaviors from Assessment Scales

Motor Scale

1. Rolls from side to back
2. Rolls from back to side
3. Rolls from stomach to back
4. Rolls from back to stomach
5. Rolls from back to side sitting
6. Moves from stomach to sitting
7. Moves from sitting to stomach
8. Recovers balance in sitting when reaching for a toy
9. Moves from stomach to hands and knees
10. Creeps
11. Kneels from hands and knees
12. Moves from hand and knees to sitting
13. Uses 1/2 kneel to assume standing from supported kneeling
14. Maintains balance in standing while reaching for a toy

Sensory Scale: Movement and Touch

1. Reacts to and tolerates touch
2. Reacts to and tolerates movement
3. Holds object in hand
4. Seeks out object after it touches child
5. Reaches towards toy
6. Reaches for and grasps toy
7. Localizes point of touch on body
8. Pats and/or tactually explores objects
9. Explores container
10. Fingers hole in pegboard
11. Places block in formboard
12. Locates last hole and inserts peg
13. Places circle and square in formboard
14. Places blocks in reversed formboard
15. Distinguishes two indoor surfaces

Sensory Scale: Awareness and Localization of Sound

1. Reacts to sound
2. Makes a grasping motion in response to sound
3. Turns toward sound
4. Reaches hand towards a soundmaking toy after grasping the toy
5. Reaches toward a soundmaking toy after touching the toy
6. Reaches hand toward soundmaking toy after hearing the toy
7. Reaches hand toward soundmaking toy placed directly in front of her

8. Grasps soundmaking toy placed in front or to either side of the child
9. Moves toward sound source
10. Moves toward, locates and grasps sound source

Cognition

1. Orients to two sounds.
2. Takes hand or toy to mouth.
3. Searches for object when removed from grasp.
4. Swipes at or hits suspended toy.
5. Holds one object in each hand.
6. Pats or feels object contacted.
7. Searches for dropped object.
8. Reaches around barrier to get toy.
9. Drops one object to obtain third.
10. Removes toy from small box with lid.
11. Recognizes the reversal of an object.
12. Places one block in container.
13. Demonstrates functional use of objects.
14. Pulls string horizontally to secure toy.
15. Matches three pairs of common objects (2 cups, 2 shoes, 2 dolls).
16. Places 6-8 blocks in container.
17. Removes small object from narrow-necked bottle.
18. Identifies three common objects.
19. Points to basic body parts.

always begun at Level "A", which provided the child with hand-on-hand or full physical guidance as he or she completed the training item. Level "B", the intermediate level of prompt, provided the child with a tap on hand or shoulder to prompt the child that training was beginning. Level "C", which involved minimal cuing for the child, was in most cases restricted to a verbal prompt alone. This shaping procedure was similar to that used in many criterion-based curricula for severely impaired children (Lent & McClean, 1976).

The motor section of the curriculum underwent modification during the field test, in order to further validate this revised material, a panel of experts reviewed the motor module toward the end of the field test. These review are summarized in Appendix A.

Participant Selection

While the assessment and training materials were being developed by project staff, young multiply impaired children were being identified for inclusion in the field testing of the materials. Criteria for participant selection for the field test are contained in Table 2.

Table 2

Characteristics of Children Selected
for Inclusion in the Fieldtest

1. Have little or no means of independent mobility (i.e., non-ambulatory, non-crawlers).

2. Are developmentally within an age range of approximately 0 - 2 years.

3. Have at least rudimentary fine motor skills (i.e., the ability to reach, grasp, and release).

4. Have no vision, or if low vision, rely primarily on tactual and auditory cues rather than visual cues.

The selected children had little or no means of independent mobility at the beginning of the study, and relied primarily on tactual or auditory cues rather than visual cues to gain information about their environment. Surveys of several programs serving multiply handicapped blind or low vision children were completed in Nashville, Tennessee, Auburn, Alabama, and Muncie, Indiana. Twenty-two children were identified as meeting the criteria for inclusion in the field test. Descriptive information on the 22 participants is contained in Table 3.

Pretesting

Once children were identified and parental permission for participation was obtained, they received a pretest to determine their level of functioning prior to the initiation of intervention. The pretest consisted of administration of the assessment scale developed by project staff during the first three months of the project. It provided data on each child's present level of functioning in the cognitive, motor, and sensory domains (tactual and auditory). For purposes of statistical analysis, the pretest scores obtained for each of the three areas were summed to obtain a composite score indicating

Table 3

#	City	Training Site	Age (Month)	Sex	Handicapping Condition	Trainer	Estimated Cognitive Level (Months)
A-1	Auburn	Center	84	M	CP - Deaf Prof. MR	Nurse's Aide	4 mos.
A-2	Auburn	Home	42	M	Dev. Delayed CP - Athetoid Spastic Quad.	Parent	6 mos.
A-3	Auburn	Home	36	M	CP Sev. MR	Parent	2 mos.
A-4	Auburn	Center	22	M	CP Prof. MR	Nurse's Aide	4 mos.
A-5	Auburn	Center	82	M	CP Prof. MR	Nurse's Aide	4 mos.
A-6	Auburn	Center	57	F	CP Prof. MR	Nurse	4 mos.
A-7	Auburn	Home	27	M	Dev. Delayed	Parent	30 mos.
A-8	Auburn	Home	48	F	CP Dev. Delayed	Parent	6 mos.
A-9	Auburn	Home	44	F	Dev. Delayed	Mom	4 mos.
A-10	Auburn	Home	57	M	Dev. Delayed	Mom	6 mos.

Table 3 (Cont.)

#	City	Training Site	Age (Month)	Sex	Handicapping Condition	Trainer	Estimated Cognitive Level (Months)
A-11	Auburn	Home	31	F	CP Dev. Delayed	Parent	2 mos.
A-12	Auburn	Center	27	F	CP Prof. MR	Father	4 mos.
A-13	Auburn	Home	37	M		Father	2 mos.
N-1	Nashville	Center	24	F	Genetic Defect Partial Atrisomy	Teacher	3 mos.
N-2	Nashville	Center	3	F	CP - Sev. Dev. Men. Delayed	Teacher	4 mos.
N-3	Nashville	Center	18	F	CP - Spastic Diplegia globally Dev. Men. Delayed Microcephaly	Teacher	5 mos.
N-4	Nashville	Center	38	M	CP - Motor & Men. Delayed	Teacher	6 mos.
M-1	Muncie	Home	25	M	Multiple CP, HRG Loss	Parent	4 mos.
M-2	Muncie	Home	55	M	Multiple Motor, Glaucoma Prob.	Parent	29 mos.

Table 3 (Cont.)

#	City	Training Site	Age (Month)	Sex	Handicapping Condition	Trainer	Estimate Cognitive Level (Months)
M-3	Muncie	Home	18	M	Multiple 18 G-T	Parent Grandparent	2 mos.
M-4	Muncie	Home	24	F	Multiple	Parent	1 month
M-5	Muncie	Home	48	M	Multiple, CP -CLA HRG - Imp.	Parent	25 mos.

level of functioning in that domain. Children received scores on each of the 59 items on the instrument, using the following scoring system:

0 - if child was unable to demonstrate the behavior

1 - if the child demonstrated the behavior, but it was not at criterion. Criterion was defined as performance of the behaviors for two of three trials.

2 - if criterion was met.

Development and Implementation of Intervention Programs

As assessment items for each of the three intervention areas were developed, a corresponding training item was designed which gave intervenors a step-by-step guide to the procedures needed to help the child acquire the behavior. The format for training was a graduated guidance procedure whereby desired responses were shaped by eliciting successive approximations of the behavior being trained. Reaching and grasping a soundmaking toy, for example, was trained by first using hand-over-hand physical guidance to assist the child in securing the toy. The level of

training prompt, referred to as Level "A", was used until the child successfully performed the behavior for six consecutive trials. Success in Level "A" was also determined by the degree of cooperation demonstrated by the child during the training trial. Trainers were instructed to score the child a "+", indicating a successful trial, only if a reasonable amount of cooperation and attention was shown by the child.

After six consecutive successful trials at Level "A", the Level "B" training procedure was begun. Level "B" training involved the use of a prompt, such as a nudge at the child's shoulder to initiate hand movement toward a sounding toy. The nudge, while a less powerful prompt than the hand-over-hand guidance used in Level "A", provided a means of encouraging the child to attend to and initiate the task. Training of Level "B" was conducted until the child performed the task for six consecutive trials.

Level "C", the final training level for each item, consisted of a verbal prompt along with a cue to the child that training was about to begin. In most cases, the cue consisted of a tap on the child's hand, shoulder, or other location. As in Levels "A" and "B" this tap was combined with a verbal prompt to begin

training. The difference between the nudge used in Level "B" and the tap in Level "C" was the amount of information conveyed to the child regarding the nature of the task. The nudge (Level B) gave the child some prompt as to the movement expected, while the tap functioned only as a cue that training was to begin and movement was expected.

Training was begun during the second quarter of the project year with all participants. Participants were assigned to one or two experimental conditions (i.e., received training one or two of the following: motor skills, cognitive skills, sensory: awareness and localization of sound, sensory: movement and touch). Training continued throughout the second and third quarters of the project, and some children received training during the first four weeks of the fourth quarter. All children received at least sixteen weeks of training prior to posttesting.

Experimental Design

The design employed in the study was a modification of a repeated measures or treatments by subjects paradigm. Within this design, each subject served in both experimental and control conditions. Each subject generated four units of analysis. One or

two of these units were intervention (e.g., Motor, or Motor and Sensory) and the remaining unit(s) were control (e.g., Sensory and Cognitive, or Cognitive). Since there were four intervention areas (i.e., Motor, Sensory, and Cognitive), nine experiments/control combinations were necessary to insure both an equal amount of intervention time per intervention area. The experimental/control combinations are as follows:

1. Motor
2. Cognitive
3. Movement and Touch/Awareness and Localization of Sound
4. Movement and Touch/Cognitive
5. Movement and Touch/Motor
6. Cognitive/Awareness and Localization of Sound
7. Motor/Cognitive
8. Motor/Awareness and Localization of Sound/Movement and Touch
9. Motor/ Awareness and Localization of Sound

The resulting pre-posttest gain scores were analyzed using a two factor ANOVA with repeated measures on the second factor (i.e., Home v. Center X Treatment Conditions). Post-hoc analyses were performed to

determine the relative effectiveness of each intervention area.

This design took full advantage of the limited number of participants in the experiment, thereby making it very efficient. All participants were used for both experimental and control conditions. A by-product of this efficiency was that all children received some intervention during the study, a result which was ethically advantageous. Another major advantage of this design was that it controlled for the most critical confounding variables. In addition, the confounding effects of the intervention environment and the intervenor were controlled.

The primary data analyzed in the field test study were the gain scores the subjects attained on the assessment instrument. Data were obtained from pre-post performance changes. Each behavioral description was point weighted as follows:

Criterion met	= 2 points
Change occurs but criterion not met	= 1 point
No change in activity	= 0 points
Not applicable	= NA

Teacher evaluations of the instructional materials were solicited to supplement the empirical validation

of the effectiveness of the intervention system. Two types of information were obtained including 1) trainer recommendations for modifications of specific training sequences, and 2) overall rating of training sequence effectiveness.

The trainers also collected continuous data on the student's progress as the students worked through the instructional materials. These data consisted of records of the number of trials a student passed and failed during each training session based on the instructional materials. The trainers transmitted the completed data forms to the project staff on a weekly basis. Their data served two functions: 1) project staff monitoring of trainer intervention activities; and 2) trainer and project staff monitoring of the progress of the children. No formal statistical analysis was conducted on those data.

After intervention ended, a questionnaire was sent to parents and teachers who provided training to children. Results of this questionnaire indicated that parents and teachers believed the materials were well organized, sequential from basic to more advanced skills, and useful in facilitating behavior change in their children.

Results

Reliability

Inter-rater reliability was computed on the pretest conducted by each of the three research assistants employed by the project. Table 4 provides these data on the pretest and Table 5 contains the test-retest reliability conducted on the posttest. Reliabilities were 90.6% and 94.5% respectively on these two tests. The data in these two tables provide documentation that the assessment guides developed as part of the Peabody Mobility Kit for Infants can be reliably administered to young multiply impaired blind children.

Pre-posttest gain scores for the experimental and control conditions were used for all statistical analyses (Cook and Campbell, 1979). Gain scores were used as the dependent variable because of: a) non-equivalence of experimental and control condition pre-test means (11.136 and 13.95 respectively), and b) the within subject treatment design of the study. Analysis of gain scores focuses on differences in the mean change between treatment conditions as opposed to differences in post-test means.

Table 4

Percent Agreement of Two Independent Raters on the Pretest

	Cognitive	Sensory: Awareness and Localization of Sound	Sensory: Movement and Touch	Motor
Auburn n=10	98.1	94.4	95.0	96.4
Nashville n=3	89.2	87.5	90.0	90.2
Muncie N=3	90.6	90.0	86.6	79.6

Cummulative pretest inter-rater reliability for all sites and assessment areas was 90.6%.

Table 5

Percent Agreement of Two Administrations of the Posttest
(Test-retest with same administrator)

	Cognitive	Sensory: Awareness and Localization of Sound	Sensory: Movement and Touch	Motor
Auburn n=10	100.0	100.0	100.0	96.5
Nashville n=3	96.1	89.8	93.6	92.8
Muncie n=3	91.1	93.2	91.8	88.6

Cummalative posttest test-retest reliability for all sites and assessment areas was 94.5%

Table 6 presents several descriptive statistics computed on the data. Examination of Table 6 indicates both a higher mean gain and standard deviation for the Experimental condition, as compared to the control condition. Pearson Product Moment Correlation Coefficients were computed between number of trials and gain for both the experimental and control conditions. The resulting coefficients of $r = .052$ (Experimental) and $r = -.111$ (Control) were not significant.

A single factor (Treatment) repeated measures analysis of variance was used to analyze the overall effect of the training program. The difference between mean gains of subjects' experimental and control conditions was significant ($F(1,21) = 12.56$, $p < .002$).

A two factor analysis of variance with one between (Setting) and one repeated (Treatment) factor was used to analyze the effect of training implemented in either a home or center based instructional program. The primary comparison of interest, Setting, approached significance ($F(1, 20) = 4.10$, $p < .05$). The Setting X Treatment interaction was not significant. The Treatment factor was significant ($F(1, 20) = 10.93$, $p < .003$).

Table 6

Descriptive Statistics for Selected Conditions in the Experiment

Condition	X	SD
Overall Experiment (Gain)	15.59	15.96
Overall Control (Gain)	6.70	9.14
Home-Experiment (Gain)	20.85	18.54
Center-Experiment (Gain)	8.00	6.60
Home-Control (Gain)	9.31	11.0
Center-Control (Gain)	3.11	3.22
Trials-Home	1069.00	1033.787
Trials-Center	906.10	496.138

A series of t Tests was conducted to analyze subject gains within each skill area. Only two areas, Cognitive ($t(22) = 2.96$, $p < .007$) and Movement and Touch ($t(20) = 2.84$, $p < .009$) showed significant gains. The resulting t statistics for Motor ($t(20) = .42$) and Sound Localization ($T(20) = 1.31$) were not significant.

Discussion

The results of the statistical analyses suggest that the programmed intervention was generally successful, with statistically significant gains achieved in the Cognitive and Movement and Touch skill areas. The failure to obtain statistically significant gains in the Motor and Sound Localization areas can probably be attributed to the history of the subjects during the study. Several children were concurrently receiving physical therapy and/or classroom activities which were similar to the intervention program. Consequently, the control conditions for Motor and Sound Localization were at high risk for confounding. In contrast, the Cognitive, and Movement and Touch activities were relatively unique to the intervention program, and control condition gains were smaller and observed less frequently in these areas. Also, the

directions for motor activities were perhaps too technical and complex for many parents to understand. Before the end of the study the motor section was revised and directions were organized and technical terms were simplified.

The outcomes of the analysis of Home versus Center program implementation suggests that parents can effectively execute an intervention program in the area of pre-mobility for their children. However, the high variability of gain scores within the Home condition suggests that some parents may have been more successful than others. The large difference between the mean gain scores of the Home based trainees (20.85) and Center trainees (8.00) should not be construed as a marked superiority of Home based training. First, the difference was not statistically significant. Second, the training which occurred in the Home setting was very specific and intensive regarding the intervention areas. Center based training included additional areas of instruction which could make the training effect broader (i.e., lower gains in more areas in contrast to higher gains in a very restricted area). This conclusion is somewhat supported by the mean trial data which indicated that more trials occurred in the Home

setting (x = 1069) compared to the Center setting (x = 906.11).

Conclusions

This study documented the usefulness of systematic intervention in motor, cognitive, and sensory areas to facilitate developmental gains in young multiply impaired blind children. Twenty two children with developmental ages of 0 - 3 years received systematic intervention in one or two of the behavioral domains (i.e. motor, sensory, cognitive), and served as a control for one or two of the areas.

Overall, significant gains in behavior were found between children receiving 16 weeks of intervention in a particular domain, as compared with children who received no intervention. Significant gains were obtained for cognitive and sensory: movement and touch, while analyses of motor and awareness and localization of sound revealed no significant difference of experimental over control groups.

The results indicate that parents and teachers can be trained in a relatively short period of time to initiate specific interventions with young

developmentally delayed blind children, and that such intervention can yield positive changes in childrens' behavior.

In light of the critical importance of movement (i.e. orientation and mobility) for overall development, and given the interconnection of cognitive, motor and sensory skills, this data-based, criterion referenced intervention appears to be appropriate and beneficial in the education of young handicapped children. Further study is needed to more thoroughly assess the validity of the training package and replicate the findings of the present study.

References

Adelson, E., & Fraiberg S. (1976). Sensory deficits and motor development in infants blind from birth in The Effects of Sensory and Other Impairments on Early Development. (Jastrzembska, Z.S. Ed.) New York: American Foundation for the Blind.

Bourgeault, S.F., Harley, R.K., Dubose, R.F., & Langley, M.B. (1977). Assessment and programming for blind children with severely handicapping conditions. Journal of Visual Impairment and Blindness, 71, 49-53.

Cook, T.D., & Campbell, D.T. (1979). Quasi-experimentation: Design and Analysis Issues for Field Settings. Chicago: Rand McNally College Publishing Company.

Croft, N.B., & Robinson, L.W. (1975). Project Vision-Up Curriculum: A Training Program for Preschool Visually Handicapped Children. Gooding, Idaho, Idaho State School for the Deaf and Blind, 1975.

Felix, L.F., & Spungin, S.J. (1978). Preschool services for the visually handicapped: a national survey. Journal of Visual Impairment and Blindness, 72, 59-66.

Foulke, E. (1970). The perceptual basis for mobility. American\ Foundation for the Blind Research Bulletin, (23), 1-8.

Fraiberg, S.H. (1977). Insights from the Blind. New York: Basic Books.

Harley, R.K., & Merbler, J.B. (1980). Development of an orientation and mobility program for multiply impaired low vision children. Journal of Visual Impairment and Blindness, 74, 9-14.

Harley, R.K., Wood, T.A., & Merbler, J.B. (1980). An orientation and mobility program for multiply impaired blind children. Exceptional Children, 46, 327-331.

Langley, M.B. (1980). Functional Vision Inventory for the Multiply and Severely Handicapped. Chicago: Stoelting Company.

Lent, J.R., & McLean, B.M. (1976). The trainable retarded: the technology of teaching. In N.G. Haring and R.L. Schiefelbusch (Eds.), Teaching Special Children. New York: McGraw Hill Co.

Moore, M.C. (1970). Developing body image and skills of orientation, mobility and social competence in preschool, multiplyhandicapped blind children. Doctoral dissertation, University of Pittsburgh. Ann Arbor, Mich.: University Microfilms, No. 70-20.

Mori, A.G., & Olive, J.E. (1978). The blind and visually handicapped mentally retarded: suggestions for intervention in infancy. Journal of Visual Impairment and Blindness, 72, 273-279.

O'Brien, LR. (1976). Alive, Aware...A Person. Rockville, Maryland: Montgomery Public Schools.

Seelye, W.S., & Thomas, J.E. (1966). Is mobility feasible with multiply handicapped blind children? Exceptional Children, 32, 613-617.

Smith, A.J., & Cote, K.S. (1982). Look at me. Philadelphia: Pennsylvania College of Optometry Press.

Appendix A

Biweekly Report Form

Peabody Mobility Kit for Infants

Bi-Weekly Intervention Report: Week of _____

1. Child's Name: _____

2. Site of Training: (check one)
   _____ Nashville
   _____ Muncie
   _____ Auburn

3. Is training being held in: (check one)
   _____ Home
   _____ Preschool Program
   _____ Other (describe: _____)

4. Who is conducting training: (check one)
   _____ Teacher in classroom
   _____ Itinerant teacher in home
   _____ Parent
   _____ Other (describe: _____)

5. Which training area is currently being used with this child: (check all that apply)
   _____ Motor
   _____ Sensory: Sound awareness and localization
   _____ Sensory: Movement and touch
   _____ Cognitive

6. Which step is the child currently receiving training on:
   _____ Motor
   _____ Sensory: Movement and touch
   _____ Sensory: Awareness and localization of sound
   _____ Cognitive

7. Has there been progress (movement to a higher step) since you last reported on this child?

	Motor	Sensory Sound	Sensory Touch	Cognitive
Yes				
No				

8. Of items checked "Yes" in #7, above, how many steps has the child reached training criterion on? (Training trials at criterion before training began)

_____ Motor

_____ Sensory-Sound

_____ Sensory-Touch

_____ Cognitive

9. How many training trials have been conducted, by area, since you last reported on this child?

_____ Motor

_____ Sensory-Sound

_____ Sensory-Touch

_____ Cognitive

10. What comments do you have or what needs have arisen during training with this child during this report period? (Describe)

_____

_____

_____

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Appendix B

User Questionnaire

8/85

Your name: _____
(optional)

Child trained: _____
(optional)

Questionnaire
for users of the Peabody Mobility Kit for Infants
Field Test Version

We appreciate your assistance in the field testing of the Peabody Mobility Kit for Infants. The purpose of the field test was to determine the usefulness of the materials, both in terms of their ease and simplicity of use and their effect on children's behavior in cognitive, sensory and motor development. In order to continue to improve the materials, we are requesting, via the attached questionnaire, feedback from you regarding your experiences with the materials. Please complete the questionnaire and return it to us in the enclosed postpaid envelope. You may sign the questionnaire if you wish, or you may submit it without your name on it. You'll need the training notebook that you received from us to complete the items. If you are unable to complete all of the questionnaire, please complete all you can.

We appreciate your cooperation and we trust that your involvement with this project has been a positive experience for you and your child. If you have further questions or comments, please direct them to Dr. Randall Harley, Principal Investigator, Peabody Mobility Kit for Infants, P.O. Box 328, George Peabody College of Vanderbilt University, Nashville, Tennesse, 37203.

Your name:_____
(optional)

Child trained:_____
(optional)

1. Are you a parent who used these materials to work with your handicapped child at home?

_____ yes
_____ no

2. Are you a teacher who used these materials to work with one or more handicapped children in a preschool classroom?

_____ yes
_____ no

3. Were materials used with this child by professionals or in settings other than in 1 or 2 above?

_____ yes
_____ no

If yes, describe.

4. During the field test, did you use materials from the:

Cognitive Training Module

_____ yes
_____ no

Sensory: Movement and Touch

_____ yes
_____ no

Sensory: Awareness and Localization of Sound

_____ yes
_____ no

Motor Training Module

_____ yes
_____ no

5. For each of the modules listed below that you used, indicate the first training step that you used with the child at the beginning of the field test. If, for example, you began motor training by training the child to roll from stomach to back, put a 4 in the Motor Training Module blank below.

Number for Step Began Training

Cognitive Training Module _____

Sensory: Movement and Touch Training Module _____
Sensory: Awarness and Localization of Sound Training Module _____

Motor Training Module _____

How did you decide which step to begin training on?

6. List by number the steps in each module that the child could not independently complete at the beginning of the field test, but learned to do as a result of your use of the material during the field test. If, for example, your child learned to roll from stomach to back, back to sitting, and stomach to sitting during the field test, put a 4, 5, and 6 in the blank below labeled "Motor Training Module".

Steps Completed by Number

Cognitive Training Module _____

Sensory: Movement and Touch Training Module _____

Sensory: Awarness and Localization of Sound Module _____

Motor Training Module _____

7. How many days per week did this child usually receive training? _____

8. How many trials per day did you usually do with the child? _____

9. Were the instructions for use of the materials (Section 1 in your notebook) clear and easily understood?

_____ yes
_____ no

If no, please explain which items were confusing and give us your advice on making this item clearer?

11. Did the steps for each module you used follow in a fairly orderly sequence, or did you find it more useful to skip around from step to step? Did you, for example train steps 4, 5, 6, and 7 in the cognitive scale, or did you select items for training without regard for order of the steps.

_____ followed the order pretty closely
_____ skipped around quite a bit

If you skipped around, please tell us which modules you used and give any advice you have for improving the sequencing of the items.

12. Please rate, on the scale below, the ease of use and the usefulness of the materials you used. Circle the number on the scale which best corresponds to your beliefs. Ease of use refers to whether or not you believe the levels of prompt, scoring system, and instructions were clear and understandable. Usefulness refers to your belief as to whether or not your believe the use of the materials had a positive impact on your child's behavior.

Cognitive Training Module

1	2	3	4	5	6	7
Very clear and useable			Somewhat clear and useable			Very unclear and not easily useable

1	2	3	4	5	6	7
Significant positive impact on my child's behavior			Some impact on my child's behavior			Almost no impact on my child's behavior

Sensory: Movement and Touch Module

1	2	3	4	5	6	7
Very clear and useable			Somewhat clear and useable			Very unclear and not easily useable

1	2	3	4	5	6	7
Significant positive impact on my child's behavior			Some impact on my child's behavior			Almost no impact on my child's behavior

Sensory: Awarness and Localization of Sound

1	2	3	4	5	6	7
Very clear and useable			Somewhat clear and useable			Very unclear and not easily useable

1	2	3	4	5	6	7
Significant positive impact on my child's behavior			Some impact on my child's behavior			Almost no impact on my child's behavior

Motor Training Module

1	2	3	4	5	6	7
Very clear and useable			Somewhat clear and useabIe			Very unclear and not easily useable

1	2	3	4	5	6	7
Significant positive impact on my child's behavior			Some impact on my child's behavior			Almost no impact on my child's behavior

13. Other comments or suggestions.

THANKS!!!!!!!!!!!!!!!!!!!!!!!!!

Appendix C

Motor Consultants Questionnaire

Questionnaire - Peabody Mobility Kit for Infants

Motor Section

NOTE: Specific changes or editings of materials can be noted in the margins of the materials.

1. Are instructions for use of these assessment and training materials clear and understandable, and is the reading level appropriate for parents of young handicapped children? If "No", please specifically indicate suggested changes.

   Comment:

2. Is the use of levels (A,B,C) in the training program logical in light of the behaviors being trained, and is the decreasing level of physical guidance from level "A: to level "C" likely, in your opinion, to facilitate the child's acquisition of the behavior? If "No", please specifically indicate suggested changes.

   Comment:

3. Is the sequencing of the skills reasonable in light of the developmental progression which young visually impaired children are likely to follow? If "No", please specifically indicate suggested changes.

   Comment:

4. Are there behaviors omitted in this which should be included, in light of our attempt to focus on dynamic rather than static motor behavior, or are there steps which should not be included? If "No", please specifically indicate suggested changes.

   Comment:

5. Are the illustrations helpful? How might they be improved?

   Comment:

6. Is the use of massed trials and the data collection system used to record training results appropriate? If "No", please specifically indicate suggested changes.

   Comment:

7. Are the materials unique, or are there often sources which provide similar assessment information and training activities?

   Comment:

Appendix D

Sample Scale Scoresheet

Child's Name: _____
Date of Assessment: _____

Motor Scale
Scoresheet

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically incapable of this movement activity

1. Rolls from side to back _____
2. Rolls from back to side _____
3. Rolls from back to stomach _____
4. Rolls from stomach to back _____
5. Rolls from back to sitting position _____
6. Rolls from stomach to sitting _____
7. Rolls from supported sitting to stomach _____
8. Rolls from supported sitting to back _____
9. Maintains upright sitting posture _____
10. Moves from stomach to hands and knees _____
11. Creeps forward on hands and knees _____
12. Moves from hands and knees to kneeling _____
13. Moves from hand and knees to sitting _____
14. Moves to supported standing from kneeling _____
15. Maintains balance in supported standing and turning to reach for an object _____

Appendix E

Sample Training Data Record Form

TRAINING

MOTOR

+ if criterion met
− if criterion not_met

CHILD _____

Trainer _____

Step	Criterion	Level	Date	Trial 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
1. Roll from side to back.	LEVEL A: Cooperates and attends as he rolls from side to back with guidance. LEVEL B: Rolls from side to back with prompt. LEVEL C: Rolls from side to back with cue.			
2. Roll from back to side.	LEVEL A: Cooperates and attends as he rolls from back to side with guidance. LEVEL B: Rolls from back to side with prompt. LEVEL C: Rolls from back to side with cue.			

Appendix F

Project Consultants

Project Consultants

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APPENDIX G
SAMPLE ASSESSMENT ITEMS

PEABODY MOBILITY KIT FOR INFANTS
SENSORY SCALE

Awareness and Localization of Sound

1. Behavior: Reacts to sound.

Materials: Sound-making toy or bell

Procedure: This item may be assessed in either of two ways. If the child is engaged in an activity, make a new sound from a sound-making toy or bell in front of and about 12" from the child. If the child is at rest, make a sound in front of and 12" from the child. The voice of a parent or other familiar person may also serve as the soundmaker for this item. Say: "(The name of the child)". If no response repeat in a louder voice.

Observe: Changes activity (e.g., starts or stops movement) in response to sound.

Criterion: Child changes level of activity in response to sound in two of three trials.

Scoring: 0 - if no change in activity is observed.
1 - if change occurs but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to do this movement.

Note: If the child shows a preference for hearing any particular sound (music, mother's voice, T.V.) give full credit for this item. Also give full

credit for this item if full credit was given for any higher level.

2. Behavior: Makes a grasping motion in response to sound.

   Materials: Sound-making toy or bell

   Procedure: Sit one foot in front of seated child. Say: "Listen to the sound." Ring bell or sound toy in front of the child. Place bell or toy in child's hand and assist her in making the sound. Remove bell or toy from the child's grasp. Repeat the verbal prompt, "Listen to the sound" and sound it again in front of and near the child's hands, but just out of the child's reach.

   Observe: Hands open and close as if grasping.

   Criterion: Child attends to sound and opens and closes hands two of three trials.

   Scoring: 0 - if no movement is observed in either of the child's hands.

   1 - if some hand movement or attending to sound occurs but not at criterion level

   2 - if criterion is met

   NA - if child is physically not able to move fingers by herself.

3. Behavior: Turns toward sound.

   Materials: Sound-making toy or bell

   Procedure: Sit facing the seated child with bell or other sound-making toy ready. Help the child's head rest at center and remain there for three

seconds. Say, "Listen to the sound" and ring the bell or sound the toy at ear level of child and about 45 degrees from the center. Physically guide child's head or head and body to turn towards the sound. Repeat procedure three times to left and three times to right giving only the verbal prompt, "Listen to the sound." If no response occurs to toy or bell, try the item with a familiar voice.

Observe: Turns head, eyes, and /or body to localize the sound.

Criterion: Child turns towards sound in each of two directions two of three trials.

Scoring: 0 - if child does not turn towards sound.
1 - if turn towards sound is present but below criterion level.
2 - if criterion is met.
NA - if child is physically not able to move head, eyes, or body from side to side.

4. Behavior: Reaches hand toward a soundmaking toy after grasping the toy.

Materials: Sound-making toy or bell.

Procedure: Sit one foot in front of seated child and sound bell or toy several times at ear level at a distance of one foot and 45 degrees from the center. Place the bell or toy in the child's hands and assist child in sounding the toy. Say: "Ring the bell" or "Sound the toy." Then

have her drop the bell or remove it from her hands and sound it off center just out of reach. Physically guide the child to reach toward the toy and let her hold it. Repeat the procedure giving verbal prompt only.

Observe: Reaches one or both arms towards sound.

Criterion: Child attends to the sound and reaches one or both arms towards sound for two of three trials.

Scoring: 0 - if child's hands remain close to body and child doesn't reach out.

1 - if some arm movement is observed, but not in the general direction of the toy.

2 - if criterion is met.

NA - if child is physically not able to reach by herself.

5. Behavior: Reaches toward a soundmaking toy after touching the toy.

Materials: Sound-making toy or bell.

Procedure: Sit one foot in front of the seated child and sound the bell or toy several times at ear level at a distance of one foot and 45 degrees from the center. Touch the bell or toy to the child's hand and withdraw it while sounding it again. Physically guide the child to reach toward the bell, touching it. Place it immediately off center just out of reach and sound the toy once more. Say: "Find the toy (or bell)."

Observe: Reaches one or both arms towards sound.

Criterion: Child attends to the sound and reaches one or both arms toward sound two of three trials.

Scoring: 0 - if child's hands remain close to body and doesn't reach.

1 - if some arm movement is observed, but not in the direction of the toy.

2 - if criterion is met.

NA - if child is physically not able to reach by herself.

6. Behavior: Reaches hand toward soundmaking toy after hearing the toy sounded off to one side.

Materials: Sound-making toy and bell.

Procedure: Sit one foot in front of the seated child and sound bell or toy several times at ear level at a distance of one foot and 45 degrees from center. Say: "Find the toy (or bell)." Physically guide the child's hand to the toy. Repeat procedure giving the verbal prompt only.

Observe: Reaches one or both arms towards sound.

Criterion: Child attends to the sound and reaches one or both arms towards sound two of three trials.

Scoring: 0 - if child's hands remain close to body and doesn't reach.

1 - if some arm movement is observed, but not in the direction of the toy.

2 - if criterion is met.

NA - if child is physically not able to reach by

herself.

7. Behavior: Reaches hand toward soundmaking toy placed directly in front of her.

Materials: Sound-making toy or bell.

Procedure: Sit one foot in front of seated child and sound bell or toy at ear level at the center at a distance of about one foot. Present the toy when the child's head is at the center. Say: "Find the toy (or bell)." Physically guide the child's hand to the toy. Repeat the procedure giving the verbal prompt only.

Observe: Turns her head and reaches one or both arms towards sound.

Criterion: Child moves arm or arms towards sound two of three trials.

Scoring: 0 - if child's hands remain close to body and she doesn't reach.

1 - if some arm movement is observed, but not in the direction of the toy.

2 - if criterion is met.

NA - if child is physically not able to reach by herself.

8. Behavior: Grasps soundmaking toy placed in front or to either side of the child.

Materials: Sound-making toy or bell.

Procedure: Sit one foot in front or to either side of the seated child and sound a bell or toy. Sound the toy on a lap board about 6" away from child's

hands. Say: "Take the toy (or bell)." Physically guide the child to reach for and grasp the toy. Repeat the procedure giving the verbal prompt only.

Observe: Reaches out and grasps object.

Criterion: Child reaches and grasps object two of three trials (retention or lifting of object off lap board is not required for meeting criterion on this item).

Scoring: 0 - if child's hands remain close to body and doesn't reach with hands.

1 - if child moves fingers and/or reaches with hands or fingers part way to toy or touches the toy but doesn't grasp it.

2 - if criterion is met.

NA - if child is physically not able to reach and grasp by herself.

9. Behavior: Moves toward sound source.

Materials: Sound-making toy or bell.

Procedure: Place the child on hands and knees or in best position for movement. Sit three feet away from the child. Sound a bell or toy at ear level for three trials, once at the center, once about 45 degrees to the left and once 45 degrees to the right of the child. Continue to sound toy as child moves to assist her in finding the source of sound. Say:"Find the toy (or bell)."

Observe: Moves halfway toward direction of bell or toy.

Criterion: Child moves by any independent means halfway towards an object three feet away two of three trials.

Scoring: 0 - if no movement towards source of sound.

1 - if some body movement is observed but not in the direction of the toy.

2 - if criterion is met.

NA - if child is physically not able to move by herself.

10. Behavior: Moves toward, locates and grasps sound source.

Materials: Sound-making toy or bell.

Procedure: Place the child on hands and knees or best position for movement. Sit three feet away from the child. Say, "Find the toy". Sound the toy off to one side. Have another person help the child move to the toy and grasp it when she gets there. Move three feet away again. Sound a bell or toy at ear level for three trials, once at the center 45 degrees to the left and 45 degrees to the right of the child. Continue to sound bell or toy as child moves to assist her in finding source of sound. Say: "Find the bell (or toy)."

Observe: Moves to and grasps bell or toy.

Criterion: Child moves by any means towards and grasps bell (or toy) three feet away two of three trials.

Scoring: 0 - if no movement and grasping.

1 - if movement and grasping occurs but not for all three trials.

2 - if criterion is met.

NA - if child is physically not able to move and grasp by herself.

Child's Name: _____
Date of Assessment: _____

Sensory Scale
Awareness and Localizatiion of Sound

Scoresheet

Scoring: 0 - if behavior does not occur

1 - if behavior occurs but not at criterion level

2 - if criterion is met

NA - if child is physically not capable of this movement activity

1. Reacts to sound _____
2. Makes a grasping motion in response to sound _____
3. Turns toward sound _____
4. Reaches hand towards a soundmaking toy after grasping the toy _____
5. Reaches toward a soundmaking toy after touching the toy _____
6. Reaches hand toward soundmaking toy after hearing the toy sounded off to one side _____
7. Reaches hand toward soundmaking toy placed directly in front of her _____
8. Grasps soundmaking toy placed in front or to either side of the child _____
9. Moves toward sound source _____
10. Moves toward, locates and grasps sound source _____

PEABODY MOBILITY KIT FOR INFANTS
SENSORY SCALE:

Movement and Touch Assessment

1. Behavior: Reacts to and tolerates touch.

Materials: Soft brush, rough carpet sample, or vibrating toy.

Procedure: This item may be assessed in either of two ways. If the child is engaged in an activity, touch the child with a soft brush, piece of rough carpet or toy. Say: "Feel the brush." If the child is at rest, touch the child with similar materials.

Observe: Changes activity level (e.g., starts or stops movement in response to touch or withdraws, tenses cries, smiles, laughs, vocalizes, etc.).

Criterion: Child changes level of activity in response to touch for two of three trials.

Scoring: 0 - if no change in activity is observed.

1 - if change occurs but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement.

Note: If the child has demonstrated consistent preference for being touched by certain toys, pacifiers, or other objects, give full credit for this item. Also give full credit for this

item if you give full credit for any higher level item.

2. Behavior: Reacts to and tolerates movement.

Materials: Rocking chair, swing, or hammock.

Procedure: Gently rock the child in a rocking chair, swing, hammock, or other equipment for rocking. Say: "Feel the rocking (swinging)."

Observe: Changes activity level (e.g., starts or stops movement in response to vibration, or withdraws, tenses, cries, smiles, laughs, vocalizes, etc.).

Criterion: Child changes level of activity in response to movement for two of three trials.

Scoring: 0 - if no change in activity is observed.
1 - if change occur but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to do this independent movement.

Note: Also give full credit for this item if you give full credit for any higher level item.

3. Behavior: Holds object in hands.

Materials: 4" size toys

Procedure: Stand behind the seated child and place a toy in the child's hands by physically placing both her hands on the toy. Say "hold the toy". Continue to guide the child to hold the toy for 20 seconds, and encourage exploration of toy. Remove the first toy from the child's grasp,

give the child another toy, and repeat the verbal prompt.

Observe: Holds the toy 20 seconds.

Criterion: Child holds one toy for at least 20 seconds.

Scoring: 0 - if child makes no attempt to maintain her grasp on the toy.

1 - if child holds toy for less than 20 seconds.

2 - if criterion is met.

NA - if child is physically not able to grasp.

4. Behavior: Seeks out object after it touches the child.

Materials: Soft brush.

Procedure: Stand beside the seated child. Touch the child's cheek with a soft brush two times, using firm but gentle pressure, then withdraw the brush a few inches away from the cheek after about one to two seconds. Say: "Find the brush." Physically guide the child to reach out seeking the brush. Repeat the procedure giving the verbal prompt, "Find the brush," and observe the child's behavior and score.

Observe: Reaches in the direction of the brush once the brush is removed.

Criterion: Child makes a searching behavior for two of three trials.

Scoring: 0 - if no change in activity is observed.

1 - if change occurs but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do independent hand movement.

5. Behavior: Reaches towards toy .

Materials: Small toy.

Procedure: Sit one foot directly in front of the child who is on her stomach, place a toy in the child's hand, then withdraw it and place it on the floor about two inches from the child's hand just off midline. Say: "Find the toy." Physically guide one or both arms to reach toward the toy touching it. Repeat the procedure using another toy, giving the verbal prompt only.

Observe: Extends one or both arms towards toy.

Criterion: Child extends one or both arms towards toy in two of three trials.

Scoring: 0 - if child's hands remain close to body and extension of arms does not occur.

1 - if some arm movement is observed but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to extend arm independently.

6. Behavior: Reaches for and grasps toy.

Materials: Small toy.

Procedure: Sit one foot in front of child who is on her stomach and place a toy in child's hand, then withdraw it and place it on the floor about two inches from the child just off midline. Say,

"Get the toy." Physically guide the child to reach for and grasp the toy. Repeat the procedure giving the verbal prompt only.

Observe: Reaches out and grasps toy.

Criterion: Child reaches and grasps toy for two of three trials.

Scoring: 0 - if child's hands remain close to body and no arm extension or hand movement is noted.

1 - if child contacts object but does not grasp it.

2 - if criterion is met.

NA - if child is physically not able to extend arm and/or independently grasp with it.

7. Behavior: Localizes point of touch on body.

Materials: Adhesive stickers, bandaid or other objects that when placed on a part of the child's body will remain there (hat, glove, sock, etc.).

Procedure: Sit behind the child. Place a sticker or a bandaid either on the child's cheek, hand, arm, leg or exposed tummy. Physically guide the child's hand to touch the sticker or bandaid.

Observe: Touches the general area where an object has been attached.

Criterion: Child touches correct area in two of three trials for each body part within ten seconds of your touch.

Scoring: 0 - if no change in activity is observed.

1 - if change occurs but not at criterion

level (one of three trials for each body part).

2 - if criterion is met.

NA - if child is physically not able to touch area where item is attached.

8. Behavior: Pats and/or tactually explores objects.

Materials: A soft brush, texture ball, textured beads, nerf toys.

Procedure: Sit in front of the child facing her. Hand her the brush so that she holds the handle in one hand. Say "Feel the brush." Physically guide the child's other hand to pat the soft bristles and rub them. Take the child's hand and physically guide it to feel the end of the brush, the back of it and the handle which her other hand is grasping. Help her return to the bristles. Give the child a texture ball in both hands and say "Feel the ball." Give no physical assistance.

Observe: Holds the toy with one hand while patting, rubbing and/or exploring the surface of the object with the other hand.

Criterion: Child pats and/or tactually explores different toys offered two out of three trials.

Scoring: 0 - if child does not hold the object

1 - if child holds the object or bangs it on a surface but does not use one hand to feel or pat object's surface at criterion level.

2 - if criterion is met.

NA - if child is physically not able to use two hands together to grasp with one and move the other.

9. Behavior: Explores container.

Materials: A large drinking cup, bowl, small box and small toys such as jingle bells, dried beans, balls, or water.

Procedure: Sit in front of the seated child facing her. Place small objects or a small amount of water inside a container. Place the child's hand on the outside of the container and help her shake it causing the object to make noise. Say, "Put your hands in." Physically guide the child's hands to the edges of the container and into it, feeling the sides on the way to the objects/water at the bottom. After the child plays a moment, take the container away. Remove the contents and put some other small objects/water in the container. Again hand the container to the child, help her shake it and repeat the verbal prompt. Observe the child's behavior.

Observe: Places her hand or hands inside the container and feels the contents.

Criterion: Child explores the contents of the container during two of three trials.

Scoring: 0 - if child does not place a hand into the container.

1 - if child places one or both hands into the

container but does not feel contents or does not reach criterion level.

2 - if criterion is met.

NA - if child is physically not able to use two hands together to hold with one and move the other.

10. Behavior: Fingers hole in pegboard.

Materials: A large wooden or tactile mat pegboard.

Procedure: Sit in front of the seated child facing her or behind her while she is seated at the table. Place the empty pegboard in front of the child and say, "Feel the hole". Physically guide the child's hands around the edges of the pegboard then over its surface. Take the child's index finger and place it in one hole turning her fingers slightly side to side to feel the bottom and sides of the hole. Take the child's hands away and repeat the verbal prompt, "Feel the hole" without any physical guidance.

Observe: Locating and fingering one or more holes on the pegboard.

Criterion: Child locates and fingers a hole on two of three trials.

Scoring: 0 - if child does not reach for the pegboard.

1 - if child locates the pegboard but does not finger the hole at criterion level.

2 - if criterion is met.

NA - if child is not physically able to reach

and use her finger individually.

11. Behavior: Places block in formboard.

Materials: Formboard (with only circle empty) and circle.

Procedure: Place the formboard with circle in its hole in front of the child. Physically guide the child to remove the circle and place it below the hole. Say: "Place the circle in the hole." Physically guide the child's hands to place the circle in the formboard. Help the child remove the circle, placing it in a position below its hole and repeat the verbal prompt without the physical guidance.

Observe: Places the circle in the hole.

Criterion: Child places circle in hole for two of three trials.

Scoring: 0 - if child does not place circle in board.
1 - if child places circle in board but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to move hands independently.

12. Behavior: Locates last hole and inserts peg.

Materials: A large wooden or tactile mat pegboard with a a single row of pegs (5-10 only).

Procedure: Sit in front of the seated child facing her (or behind her at a table). Place the pegboard with pegs in all the holes in front of the child. Physically guide the child to remove the right

corner peg and place it on the surface in front of her. Say, "Find the hole and put the peg in the hole". Physically guide the child to feel the pegboard by starting at the left corner and moving her hands to the right until she fingers the empty hole. Physically guide her to pick up the peg and place the peg in the hole.

Help the child remove the peg and say. "Find the hole and put the peg in the hole."

Observe: Locates empty hole and places peg into hole.

Criterion: Child locates hole and inserts peg two of three trials.

Scoring: 0 - if child does not try to locate or place peg.

1 - if child locates pegboard but does not find hole or does not place peg at criterion level.

2 - if criterion is met.

NA - if child is not physically able to reach, grasp, and release.

13. Behavior: Places circle and square in formboard.

Materials: Formboard (with only circle and square empty) and blocks.

Procedure: Place the formboard with the circle and square in their holes in front of the child.

Physically guide the child to place the round and square blocks between the board and the child and in the same order as on the formboard.

Say: "Put the blocks in the holes."

Physically guide the child's hands to place the shapes in the formboard. Help her remove the shapes, placing them in their position below their holes and repeat the verbal prompt without physical guidance.

Observe: Places the blocks in the holes.

Criterion: Child places circle and square in formboard two of three trials.

Scoring: 0 - if child does not place blocks in board.
1 - if child places blocks in board but not at criterion level.
2 - if criterion is met.
NA - if child is not physically able to move hands independently.

14. Behavior: Places blocks in reversed formboard.

Materials: Formboard (with only circle and square empty) and round and square blocks.

Procedure: Place the assembled formboard in front of the child. Physically guide the child to remove and place the shapes between her and the formboard but in reverse order to their corresponding holes (i.e., square in front of circle, circle in front of square). Say: "Place the blocks in their holes." Physically guide the child's hands to place the circle and then the square in the formboard. Physically guide the child to remove the circle and square placing them in their original positions in reverse order to

their corresponding holes and repeat the verbal prompt.

Observe: Places the blocks in the proper positions.

Criterion: Child places circle and square in formboard in reverse order in two of three trials..

Scoring: 0 - if child does not place both blocks in board.

1 - if child places blocks in board but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to move hands independently.

15. Behavior: Distinguishes two indoor surfaces.

Materials: A small throw rug.

Procedure: Place the child in a crawling position (on hands and knees) near a small throw rug that is placed on a smooth hardwood or tile floor. Place one hand on the rug. Say: "Move to the rug." Physically guide the child to move to the rug. Place the child in her original position on the floor and repeat the verbal prompt.

Observe: Moves to the rug.

Criterion: Child moves from the floor to the rug in two of three trials.

Scoring: 0 - if no change in activity is observed.

1 - if change occurs but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to move independently.

object around so the meaningful end is toward the child and then let him use the toy or object in a functional way. Repeat the procedure giving the verbal cue only.

Observe: Turns the toy or object around and uses it functionally.

Criterion: The child turns the toy or object around and uses it functionally two out of three times.

Scoring: 0 - if the child does not turn the toy or object to its meaningful end.

1 - if the child turns the toy or object but does not use it functionally or does not turn at criterion level.

2 - if criterion is met.

NA - if child is physically not able to hold and release with both hands.

12. Behavior: Places one block in container.

Materials: Small wide-mouthed container and several blocks or other small toys.

Procedure: Physically guide the child to reach and grasp one of the objects and then drop it in the container. As you physically guide, say "Put it in." Then repeat the verbal prompt without physical guidance.

Observe: Reaches, grasps one object and puts it in the container.

Criterion: Child places object in container on verbal cue two of three trials.

Scoring: 0 - if child does not reach out and grasp object.

1 - if child obtains object but does not drop it in the container.

2 - if criterion is met.

NA - if child is physically not able to reach/grasp/release.

13. Behavior: Demonstrates functional use of objects.

Materials: Shoe, hat, toy telephone, cup, hammer.

Procedure: Present each object, one at a time, as you say: "Show me how you use this." If necessary, give physical guidance with the first object presented; then repeat the item with a verbal cue only.

Observe: Demonstrates the correct use of five common objects. (Puts shoe on foot, hat on head, phone to ear or mouth, drink from cup, and pounds hammer).

Criterion: Child demonstrates correct use of five common objects for two of three trials.

Scoring: 0 - if child does not demonstrate use of any of the objects.

1 - if child demonstrates use of some objects, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to make movements for using objects functionally.

14. Behavior: Pulls string horizontally to secure toy.

Materials: Sound-making toy attached to a 10" piece of

heavy string or yarn.

Procedure: Place toy in seated child's hand and help him feel the string attached to it. Then remove and place it approximately 10" away from the child. Place end of string in child's hand. As toy sounds, physically guide child to pull string so that toy is within grasping distance. As you physically guide, say: "Get the toy." After this demonstration, place end of string in in child's hand again and say: "Get the toy."

Observe: Pulls the string to obtain the toy.

Criterion: Child pulls string and grasps sounding toy two of three trials.

Scoring: 0 - if child makes no attempt to pull string.
1 - if child pulls string but does not obtain toy.
2 - if criterion is met.
NA - if child is physically not able to grasp and pull.

15. Behavior: Matches three pairs of common objects (2 cups, 2 shoes, 2 dolls).

Materials: Two cups, 2 shoes, 2 dolls. If the 2 objects are not identical they should be very similar in size.

Procedure: Sit facing the child at table or desk. Place one object in front of child. Guide child's hands to feel object. Next, place the like object and two others in a row between you and object to be

matched. Guide child's hands to feel these objects. Then say "Find the one like this", as you guide the child's hand to the object to be matched. Then guide the child's hand to feel each of the 3 objects in the row.

Observe: Matches the object to its mate.

Criterion: Child matches 3 pairs of common objects in two of three trials.

Scoring: 0 - if child does not match objects.

1 - if child matches some of the objects but not at criterion level

2 - if criterion is met.

NA - if child is physically not able to reach for objects.

16. Behavior: Places 6-8 blocks in container.

Materials: Large wide-mouthed container and 6-8 wooden or plastic blocks.

Procedure: Place the blocks and the container within reach of the child. Guide the child's hand to locate the blocks and the container, then guide the child to place one block in as you say: "Put all the blocks in." Repeat the verbal prompt without the physical guidance.

Observe: Places at least 6 blocks in container.

Criterion: Child places 6-8 blocks in container two of three trials.

Scoring: 0 - if child does not reach and grasp blocks.

1 - if child plays blocks or puts some of them

in the container but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to reach, grasp and release.

17. Behavior: Removes small object from narrow-necked bottle.

Materials: Small narrow-necked bottle and small objects such as dried beans, small balls, cereal pieces, marbles or jingle bells.

Procedure: Physically guide the child to place 4-6 objects in the container, place the container in one of the child's hands, then physically guide the child to dump the objects into the other hand as you say: "Get them out." Then return the objects to the bottle, place the bottle in the child's hand, and repeat the verbal prompt without physical guidance.

Observe: Dumps all objects from the bottle by shaking or spilling them. The bottle must be turned upside down.

Criterion: Child removes all small objects from narrow-necked bottle by turning the bottle over two of three trials.

Scoring: 0 - if child does not turn the bottle and no objects are removed.

1 - if child gets some of the objects out of the bottle.

2 - if criterion is met.

NA - if child is physically not able to grasp

the bottle and turn it.

18. Behavior: Gives three common objects to the trainer.

Materials: Shoe, cup, spoon

Procedure: Place each of the three items in front of the seated child and guide his hands to contact the objects as you name them. Then say: "Give me the _____."

Observe: Obtains the object named and holds it up or gives it to you.

Criterion: Child holds up or offers each of the three objects on verbal prompt for two of three trials.

Scoring: 0 - if child does not grasp objects.

1 - if child picks up objects but does not pick up correct object for the verbal cue.

2 - if criterion is met.

NA - if child is physically not able to reach and grasp.

19. Behavior: Points to basic body parts.

Materials: None needed.

Procedure: Say: "Touch your:

a. nose

b. feet

c. hand

d. mouth

e. ears

Use other words if the child will respond more easily. If the child does not respond to the first item, physically guide

the bottle and turn it.

18. Behavior: Gives three common objects to the trainer.

Materials: Shoe, cup, spoon

Procedure: Place each of the three items in front of the seated child and guide his hands to contact the objects as you name them. Then say: "Give me the _____."

Observe: Obtains the object named and holds it up or gives it to you.

Criterion: Child holds up or offers each of the three objects on verbal prompt for two of three trials.

Scoring: 0 - if child does not grasp objects.

1 - if child picks up objects but does not pick up correct object for the verbal cue.

2 - if criterion is met.

NA - if child is physically not able to reach and grasp.

19. Behavior: Points to basic body parts.

Materials: None needed.

Procedure: Say: "Touch your:

a. nose

b. feet

c. hand

d. mouth

e. ears

Use other words if the child will respond more easily. If the child does not respond to the first item, physically guide

him to complete the activity; then repeat the verbal prompt without physical guidance.

Observe: Touches body parts on request.

Criterion: Child touches each of five body parts on request two of three trials.

Scoring: 0 - if child does not respond to verbal requests.

1 - if child responds by touching some body parts, but performance is below criterion level.

2 - if criterion is met.

NA - if child is physically not able to reach parts of his body.

Child's Name: _____
Date of Assessment: _____

Cognition Scale

Scoresheet

Scoring: 0 - if task is not performed

1 - if task is attempted but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to complete task due to motor problems

1. Orients to two sounds _____
2. Takes hand or toy to mouth _____
3. Searches for object when removed from grasp _____
4. Swipes at or hits suspended toy _____
5. Holds one object in each hand _____
6. Pats or feels object contacted _____
7. Searches for dropped object _____
8. Reaches around barrier to get toy _____
9. Drops one object to obtain third _____
10. Removes toy from small box with lid _____
11. Recognizes the reversal of an object _____
12. Places one block in container _____
13. Demonstrates functional use of objects _____
14. Pulls string horizontally to secure toy _____
15. Matches three pairs of common objects (2 cups, 2 shoes, 2 dolls) _____

16. Places 6-8 blocks in container _____

17. Removes small object from narrow-necked bottle _____

18. Gives three common objects to trainer _____

19. Points to basic body parts _____

APPENDIX H
SAMPLE TRAINING ITEMS

Step 5: REACHES TOWARDS TOY.

Activity Goal: The child will reach toward toy after it is touched to the child's arm.

Setting: A quiet room.

Materials: Small toy.

Starting the session: Place the child on her stomach in a quiet part of the room.

Say: "Today I am going to show you a toy."

Trainer Does	Trainer Says	Child Does
Level A		
Sit in front of the child while she is lying on her stomach. Place toy in the child's hand briefly and withdraw it on floor about two inches from the child's hand and just off to one side.		
	"Find the toy."	
Guide hand so that it goes toward and touches the toy. (Let the child touch the toy for reinforcement.)		
		Cooperates and attends as she reaches toward toy.
Level B		
Sit in front of the child while she lying on her stomach. Place a toy in the child's hand briefly and withdraw it on the floor about two inches from the child's hand just off to one side.		
	"Find the toy."	
Prompt the child to move her hand toward the toy by pushing her elbow.		
		Continues to reach towards toy after pushing her elbow and

releasing it.

Level C

Sit in front of the child while child is lying on the stomach on floor. Place a toy in the child's hand briefly and withdraw it on floor about two inches from the child's hand just off to one side.

"Find the toy."

Tap the child's hand or elbow as a cue to move her hand toward the toy.

Continues to reach for toy after cue.

Step 7: REACHES HAND TOWARD SOUNDMAKING TOY PLACED DIRECTLY IN FRONT OF HER.

Activity Goal: The child will reach towards a soundmaking toy placed directly in front of her.

Setting: A quiet room.

Materials: Soundmaking toy or bell.

Starting the session: Place the seated child in a quiet part of the room.

Say: "Today, you are going to reach toward the bell."

Trainer Does	Trainer Says	Child Does
Level A		
Sit in front of the child and ring a bell several times at ear level directly in front of child from about one foot away.		
	"Get the bell."	
Physically guide her hand until it reaches the bell.		
		Cooperates and attends as she extends one or both hands toward soundmaking object.
Level B		
Sit in front of the child and ring a bell several times at ear level directly in front of child from about one foot away.		
	"Get the bell."	
Gently push the child's elbow to move her hand partway to the bell.		
		Extends one or both hands toward the soundmaking object.

Level C

Sit in front
of child and
ring a bell
at ear level
directly in front
of the child and
about one foot away.

"Get the bell"

Tap the child's
elbow to get her
moving toward the
bell.

Extends one or both
hands toward the
soundmaking object.

Step 7: MOVES FROM SITTING TO STOMACH

Activity Goal: The child will roll from supported sitting to stomach.

Setting: Any opportunity to encourage the child to interact with people or objects/toys and move from sitting to lying on stomach.

Materials: Sounding toys, mat, or carpeted area, swim ring.

Prerequisites:
1. Ability to move head, shoulders and hips independently of each other.
2. Ability to move arms and legs independently.
3. Ability to sit briefly unsupported.

Starting the session: Play with the child as he sits up and then reposition yourself or a toy so that he must lie on his stomach to play with you or toy.

Say: Appropriate phrases as you move through the activity that will cue the child to turn toward you and let him know you are going to help him move/roll.

Trainer Does	Trainer Says	Child Does
Level A		
Preparation 1. Support child in sitting position with legs out in front of him.. 2. Kneel beside him facing his right side.		
Begin Movement 3. Place your left hand on his left shoulder with your arm behind his head.		
4. To begin the movement to his stomach, turn his head to the left and toward his chest, as you say...	"_____, lie on your side."	1. Cooperates and attends as he turns his head to the left and down toward his chest.
5. With your right hand lift his right leg slightly and gently push the leg and hip toward the right shoulder shifting most of his weight onto his left hip.		2. He lifts his right leg, bends his hip and leg to the left and rolls onto his left side.
6. Guide his right hip away from you and roll him onto his left side; he should be		3. Propping himself on his left hand and forearm, he

propped firmly on his left forearm.
7. Use your right hand to straighten out his right hip and leg and guide them to the floor; rolling him over onto his stomach.
8. As he rolls over, lift his left shoulder and help him free his arm and straighten it.
9. Be sure his head is centered and he is resting, on his tummy.
10. Repeat activity, having child turn to the opposite side to roll over onto stomach.

straightens his hip and leg, turns his trunk and hips and rolls over onto his stomach.

4. He then frees his left arm.

Level B

Preparation
1. Child is in supported sitting position.
2. Kneel beside him facing his right side.

Begin Movement
3. Place your left hand on his left shoulder with your arm behind his head.
4. To begin the movement to his stomach, turn his head to the left and toward his chest, as you say... "_____, lie on your side."

1. Turns his head to the left and down toward his chest, then lifts his right leg and bends it and his right hip.

5. With your right hand lift his right leg slightly and gently push the leg and hip toward his right shoulder, shifting most of his weight onto his left hip and left forearm..
6. Push right hip 2-3" away from you and roll him onto his left side. He should be propped firmly on his left forearm.
7. Use your right hand to straighten out his right hip and leg and then say... "_____, roll over onto your stomach."

2. He rolls onto his left side, propping himself up on his left forearm and then straightens his right hip and leg.

8. If necessary, turn his right hip and leg 2-3" away

from you and have him complete the turn onto his stomach.
10. Assist him in freeing his left arm, and be sure he is resting evenly on both hips and shoulders.

3. He turns his body and rolls onto his stomach then free his left arm.

Level C

Preparation
1. Child is in supported sitting position.
2. Kneel beside him facing his right side.

Begin Movement
3. Place your left hand on his left shoulder with your arm behind his head.
4. Tap his head to cue him to turn it to the left and toward his chest as you say...
" , lie on your side."
5. With your right hand slightly lift and bend his right leg and gently push up towards the right shoulder, shifting most of his weight onto his left hip.
6. Tap his right hip to cue him to turn away from you and finish rolling onto his side.
7. Be sure he is resting firmly on his left forearm.
8. Assist him by straightening out his right hip and leg then pause to see if he will turn over onto his stomach when you say...
" , roll over onto your stomach."
9. If necessary, tap his right hip and leg to cue him to roll over onto his stomach.
10. As he rolls over touch his left side to cue him to bring his arm out and straighten it. Be sure he is resting evenly on both hips and shoulders.

4. The child moves from sitting to lying on his stomach with only tapping and verbal cues.

Step 8: [illegible]

Activity Goal: The child will reach around the edge of a barrier to get a soundmaking toy.

Setting: A quiet room.

Materials: A 12" square piece of cardboard or wood and a soundmaking toy.

Starting the Session: Place the child in a sitting position on the floor or at a table and hold the barrier 8" in front of the child on the table.

Trainer Does	Trainer Says	Child Does
Level A		
Let the child play with the toy for a minute. Remove the toy from the child's hands and place it behind the cardboard or wood barrier. Sound the toy and continue to sound it.	"Find the toy."	
When the child reaches for the toy and touches the barrier physically guide the child's hand around the barrier on either side or over the top until he finds the toy.		Cooperates and attends as he reaches around the barrier and finds the toy.
Level B		
Let the child play with the toy for a minute. Remove the toy from the child's hands and place it behind the barrier. Sound the toy and continue to sound it.	"Find the toy."	
When the child reaches for the toy and touches the barrier, push his elbow so that his hand moves toward the edge		

of the obstacle on either side or toward the top.

Reaches around the barrier and finds the toy.

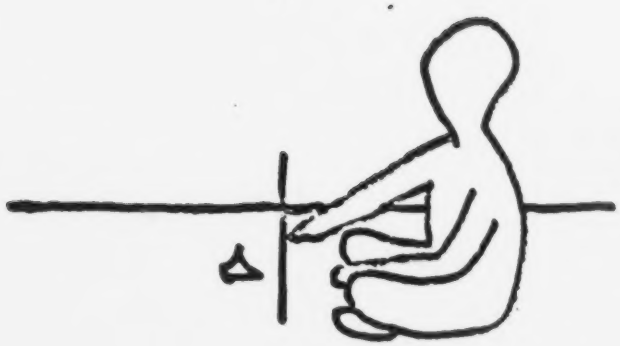
Level C

Let the child play with the toy for a minute. Remove the toy from the child's hands and place it behind the barrier. Sound the toy and continue to sound it until the child finds it.

"Find the toy."

When the child reaches for the toy and touches the barrier, tap his elbow to encourage him to reach around the barrier.

Reaches around the barrier and finds the toy.



Child's Name: _____

Date of Assessment: _____

Sensory Scale
Movement and Touch

Scoresheet

Scoring: 0 - if behavior does not occur

1 - if behavior occurs but not at criterion level

2 - if criterion is met

NA - if child is physically not capable of this movement activity

1. Reacts to and tolerates touch _____
2. Reacts to and tolerates movement _____
3. Holds object in hand _____
4. Seeks out object after it touches child _____
5. Reaches towards toy _____
6. Reaches for and grasps toy _____
7. Localizes point of touch on body _____
8. Pats and/or tactually explores objects _____
9. Explores container _____
10. Fingers hole in pegboard _____
11. Places block in formboard _____
12. Locates last hole and inserts peg _____
13. Places circle and square in formboard _____
14. Places blocks in reversed formboard _____
15. Distinguishes two indoor surfaces _____

1. Behavior: Rolls from side to back.

   Materials: Soft musical toy, squeak toy, rattle

   Evaluator's Position: Sit behind the student at shoulder level.

   Procedure: Place the student on a level surface on his side. Legs should be together, or top leg slightly ahead of bottom leg. His lower arm is extended in front of him but resting on the surface. Be sure child is stable in position. Gently sound toy above the top shoulder and to his side. If child has ability to track, show him a toy off midline and move the toy towards the periphery (off midline towards the top shoulder). If child doesn't respond to auditory or visual cue alone, gently tap child on top shoulder and verbally cue him to roll towards you by saying: " , roll over."

   Observe: Rolls from side to back.

   Criterion: Child rolls from side to back two of three trials.

   Scoring: 0 - if behavior does not occur.

   1 - if behavior occurs, but not at criterion level.

   2 - if criterion is met.

   NA - if child is physically not able to do this movement activity.

2. Behavior: Rolls from back to side.

Materials: Squeak toy or other sound-making toy of interest to the child.

Evaluator's Position: Sit on the side towards which the child will roll.

Procedure: Place child on level surface on back. Present a soft squeak toy to the child, touching his hands with the toy and then withdrawing it. Move the toy away from his hand towards the child's side to encourage the child to roll to the side. If the child doesn't respond to visual/auditory cues place your hand under the child's bottom and gently nudge him to roll to the side as you say: " , roll over."

Observe: Rolls from back to side.

Criterion: Child rolls back to side two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

3. Behavior: Rolls from stomach to back.

Materials: Squeak toy or other sound-making object of interest to child.

Evaluator's Postion: Sit on side towards which child will be rolling.

Procedure: Place student on level surface on his stomach

with arms and hands positioned at shoulder level and resting on surface. Present cue at shoulder level and beside child's head. If child doesn't respond to auditory/visual cue alone, gently lift shoulder that will be the top shoulder as he rolls. Cue child to roll as you say: "

, come see me or come get the toy."

Observe: Rolls from stomach to back.

Criterion: Child rolls from stomach to back two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

4. Behavior: Rolls from back to stomach.

Materials: Squeak toy or other sound-making toy of interest to the child.

Evalulator's Position: Sit on side towards which child is rolling.

Procedure: Place child on level surface on his back. Sound the toy at chest level and slightly to side towards which child will turn. If child has ability to visually orient to light or objects, present the visual cue off midline and move it in an arc towards the shoulder. If child doesn't respond to visual or auditory cue alone,

place your hand on the hip that will become the top hip during the roll to prone and gently nudge the hip towards you as you cue the child to get the toy.

Observe: Rolls from back to stomach.

Criterion: Child rolls back to stomach two of three trials

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

5. Behavior: Rolls from back to side sitting.

Materials: Squeak toy or other sound-making object of interest to the child.

Evaluator's Position: Sit beside the child's shoulder that will move towards the toy.

Procedure: Place child on a level surface on his back. Position a small 4"-5" stool or pillow at child's side towards which he will roll and at hip level. Sound toy to child's side then move the toy away from the side of the child so that the head comes forward to orient to cue. Then place toy on small stool and continue to activate. Physically guide child to come up to stool to contact toy and then bring him back to initial position on back. If necessary reactivate toy. If child doesn't respond to visual/auditory cue alone, lift and

push the child's shoulder from surface and guide him to turn onto his side and then push up onto his bottom hand and/or tap child's hand on the stool as you say: " , sit up."

Observe: rolls from back to side sitting.

Criterion: Child rolls from back to side sitting in two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

6. Behavior: Moves from stomach to sitting.

Materials: Squeak toy or other sound-making object of interest to the child, small stool, or pillow.

Evaluator's Position: Sit next to the child on the side over which he will roll.

Procedure: Place the child on a level surface on his stomach. Sound a soft musical toy off to one side of the child and continue to activate the toy as you bring it behind him and place it at his feet. If child doesn't respond to visual/auditory cue alone, lift him at the shoulder that will become the top shoulder so as to cue child to turn towards you. As he rolls to the side, push up on

his bottom shoulder to cue him to sit and find the toy.

Observe: Moves form stomach to sitting.

Criterion: Child rolls from stomach to sitting in two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

7. Behavior: Moves from sitting to stomach

Materials: Squeak toy or other sound-making toy of interest to child.

Evaluator's Position: Sit beside the child on side opposite to the direction in which he will turn.

Procedure: Place the child on a level surface in a sitting position in which his legs are straight in front or so that he assumes a circle sitting posture. Sound a musical toy and let the child manipulate the toy briefly. Remove the toy but continue to activate the toy as you move it to a position behind the child and beyond his reach. Rest the toy in a position that will allow the child to regain contact once he is lying on his stomach. If the child doesn't respond to visual or auditory cues alone, offer firm pressure downward and backward on the shoulder on the side

towards which the child will move onto his stomach as you say: " , find the toy."

Observe: Moves from sitting to stomach.

Criterion: Child rolls from sitting to stomach in two of three trials

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

8. Behavior: Recovers balance in sitting when reaching for a toy.

Materials: Squeak toy or other sound-making toy of interest to child.

Evaluator's Postion: Sit behind and to one side of the child.

Procedure: Place child on a level surface in a sitting position so that his legs are in front and slightly bent or so that he sits in a circle sitting position. Be sure child is stable in position prior to assessing this skill. First, sound toy 10" from child's reach and to the side. Repeat on opposite side. Then sound toy off to midline in front of child and 10" beyond reach. If child doesn't respond to visual/auditory cue to the side, place your hands at child's hips and shift his weight to one hip (in direction of toy). Allow child to shift weight back. When toy is

presented at midline, place your hands on the child's hips and shift his weight forward in the direction of the toy so that trunk is in front of pelvis. If the child reaches for the toy, you may need to place your hands on child's hips and shift his weight back to the starting position to prevent him from falling. Say: "Go get the toy."

Observe: Recovers balance in sitting.

Criterion: Child recovers sitting balance in two of three trials

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

9. Behavior: Moves from stomach to hands and knees.

Materials: Squeak toy or other sound-making object of interest to child.

Evalutator's Position: Sit to the side of the child towards which he will shift his weight in preparation for hands and knees position.

Procedure: Initially, place the child on his hands and knees so that he will understand what you want him to do (assume 4 point). Then, place child on a level surface on his stomach so that his arms are at his sides with elbows bent and ready for weight bearing. Activate toy to one side of child and

slightly above eye level. Then place the toy 18" to two feet beyond his reach and verbally encourage him to move to retrieve the toy. If he doesn't respond to visual/auditory cue alone, cue him to come up to hands and knees by placing your hand on his pelvis and rotating it toward you to shift the child's weight. As he rolls to one side, bend his hips. Place you hands on either side of his pelvis and shift his weight onto his knees.

Observe: Moves from stomach to hands and knees.

Criterion: Child moves from stomach to hands and knees.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

10. Behavior: Creeps.

Materials: Squeak toy or other sound-making object of interest to child.

Evaluator's Position: Sit on the side of the child.

Procedure: Place child on a level surface on hands and knees. Be sure that the child's arms are straight and the elbows and hands are placed evenly under each shoulder. The child's hips should be flexed (bent) and ready to creep. Activate a musical toy in front of child

(approximately 8-12" and off midline depending on visual functioning) and slightly above eye level. Move the toy slowly away from the child once he shows interest and place it on the surface 10" beyond his reach. Verbally encourage him to retrieve the toy by saying: " , come to me" and continue to activate the toy. If the child doesn't respond to visual/auditory cue alone, place your hand under his chest and offer pressure shifting his weight slightly forward and sideways (diagonally) to cue him to move.

Observe: Creeps.

Criterion: Child creeps 10" two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

11. Behavior: Kneels from hands and knees.

Materials: Squeak toy or other sound-making object of interest to child.

Evaluator's Position: Sit to the side of the child.

Procedure: Place child on a level surface on hands and knees so that his arms are straight at the elbow and his hands are placed evenly under each shoulder. Have available a small sturdy table,

chair or low surface placed before the child. Activate a musical toy in front of the child slightly above eye level and off midline. Once the child's attention is gained slowly move the toy to the chair seat or table surface. If the child has no useable vision, guide his hand to explore the toy on the surface. Child may use his hands to support himself on the chair or table as he moves from hands and knees to kneel. If he\doesn't respond to visual auditory cue alone, place the child's hands on the surface and place one hand on his chest and the other on his bottom and lift up on his chest and down on his bottom to cue him to come up as you say: " , come get the toy."

Observe: Kneels from hands and knees.

Criterion: Child kneels from hands and knees in two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

12. Behavior: Moves from hands and knees to sitting.

Materials: Squeak toy or other sound-making object of interest to child.

Evaluator's Position: Sit to the side of the child towards

which his weight is shifted.

Procedure: Place the child in a hands and knees position. Sound a toy to the side of him at the hip you are sitting next to. If he doesn't initiate sitting to play with the toy, place your hands on his shoulders or his hips. Shift his weight backwards and to the hip on the side next to you. Cue him to "find the toy."

Observe: Moves from hands and knees to sitting.

Criterion: Child moves to sitting from hands and knees two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

13. Behavior: Uses 1/2 kneel to assume standing from supported kneeling.

Materials: Squeak toy or other sound-making object of interest to the child.

Evaluator's Position: Sit or kneel beside the child.

Procedure: Place the child on a level surface in a knee-standing posture. Place child's hands on a chair or table surface that is approximately at the child's shoulder height. Sound a toy off midline and place it on the surface 10" in front of one shoulder. If the child has no useable

vision let him manipulate the toy briefly before removing it from his grasp to place it on the surface. If child doesn't respond to visual/auditory cue alone, place one hand on his hip and the other on his bottom and shift his weight diagonally to the opposite hip to encourage the free leg to move forward; and then upward on his bottom to cue child to stand up as you say: "
, go find the toy."

Observe: Uses 1/2 kneeling to assume standing from supported kneeling.

Criterion: Child uses 1/2 kneeling to assume standing from supported kneeling two of three trials.

Scoring: 0 - if behavior does not occur.
1 - if behavior occurs, but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to do this movement activity.

14. Behavior: Maintains balance in standing while reaching for an object.

Materials: Child sized chair or coffee table.

Evaluator's Postion: Stand behind child and guide him with your hands on his pelvis.

Procedure: Place child on level surface in a standing position beside the back of a child-sized chair or similar stable object (coffee table). Child's hand may assist in supporting the standing

posture. This item has three sets of procedures. Each time, encourage the child to "take the toy."

A. As the child stands at the supporting surface activate a toy and offer it to the side and 10" from the hand not holding to the supporting surface. Repeat on the opposite side. If the child has no useable vision let him manipulate it briefly before removing the toy and placing it out of reach.

B. Stand child so that his feet are apart and one foot is slightly in front of the other. Sound toy in front of child and 10" beyond his reach. If child doesn't respond by moving toward the sound, place your hands on his hips and shift weight to the forward foot.

C. Stand the child at the supporting surface with feet aligned but slightly apart. Allow the child momentary contact with the toy and offer it approximately 10" beyond his reach to the side and behind the shoulder so that he must turn to retrieve the toy. In A and B if he doesn't respond to the visual/auditory cue alone place your hands on the child's pelvic and shift his weight in the direction of the toy. In "C", shift his weight in the direction opposite the toy to allow him to rotate his trunk in order to reach the toy.

Observe: Maintains balance in standing while reaching for

toy.

Criterion: Child maintains standing balance when reaching for a toy two of three trials.

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to do this movement activity.

Child's Name:_____
Date of Assessment:_____

Motor Scale
Scoresheet

Scoring: 0 - if behavior does not occur.

1 - if behavior occurs, but not at criterion level.

2 - if criterion is met.

NA - if child is physically incapable of this movement activity

1. Rolls from side to back _____
2. Rolls from back to side _____
3. Rolls from stomach to back _____
4. Rolls from back to stomach _____
5. Rolls from back to side sitting _____
6. Moves from stomach to sitting _____
7. Moves from sitting to stomach _____
8. Recovers balance in sitting when reaching for a toy _____
9. Moves from stomach to hands and knees _____
10. Creeps _____
11. Kneels from hands and knees _____
12. Moves from hand and knees to sitting _____
13. Uses 1/2 kneel to assume standing from supported kneeling _____
14. Maintains balance in standing while reaching for a toy _____

PEABODY MOBILITY KIT FOR INFANTS
COGNITION SCALE

1. Behavior: Orients to two sounds.

Materials: Two sound toys which make the same or similar sounds. (Rattles, squeak toys, etc.)

Procedure: Place the child in sitting or lying position so that his body if facing straight ahead. Hold the toys at ear level about 12" away from the child and 15"apart. Sound one toy and then the other so that the second is sounded about 5 seconds after the first.

Observe: Slightly turns body or head in the direction of the first then the second sound.

Criterion: The child turns to each side two out of three trials.

Scoring: 0 - if the child does not turn to either side
1 - if the child turns to only one side or does not turn at criterion level
2 - if criterion is met
NA - if child is not able to physically turn to both sides or cannot hear the sounds

2. Behavior: Takes hand or toy to mouth.

Materials: Rattle, squeak toy, rubber or cloth toy.

Procedure: Place the child in any position that will make hand-to-mouth movements easy. Place objects of varying size and texture within the child's reach. Physically guide the child to make

contact with objects if he does not search for objects independently. A lapboard or tray may be useful for this activity.

Observe: Grasps toy and brings it to mouth, or brings hand to mouth.

Criterion: Child brings toy or hand to mouth two of three trials.

Scoring: 0 - if child does not bring hand or toy to mouth.
1 - if child rings hand or toy to mouth but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to bring hand to mouth.

Note: Score this item "passed" (2), if child uses another, more complex way of relating to objects (e.g., banging, hitting, shaking, tactually exploring).

3. Behavior: Searches for object when removed from grasp.

Materials: Any small soundmaking toy of interest to the child.

Procedure: Let the seated child hold a soundmaking toy in his hand. Remove it from contact with the child and hold it front of the child and within reach. Say: "Find the toy." Be sure that toy continues to sound for at least 10 seconds after it is removed from contact with the child. If the child does not extend his arms towards the toy within 10 seconds, reactivate the toy and

physically guide the child to contact the toy.

Observe: Extends his hands towards the toy in a searching manner.

Criterion: Child extends his hands towards the toy in a searching manner two of three trials. Full credit will be given for obtaining the object, but full credit is also given for extending the hands and searching for the object.

Scoring: 0 - if child does not extend hands towards object.

1 - if child extends hands but not at criterion level.

2 - if criterion is met.

NA - if child is physically not able to reach with his arms

4. Behavior: Swipes at or hits suspended toy.

Materials: Mobile, rattle, or other sound-making toy suspended within child's reach.

Procedure: Shake or hit the suspended toy to make it sound, then physically guide the seated child's arm to do the same as you say: "Hit the toy and make the sound." This item may also be done with the child lying on his back and the toy suspended above the child.

Observe: Hits toy and makes it sound, or swings arm in direction of toy.

Criterion: Child hits toy or swipes at toy two of three trials.

Scoring: 0 - if child does not extend arms towards toy.
1 - if child extends arms or hits toy but not at criterion level.
2 - if criterion is met.
NA - if child is physically not able to reach with his arms.

5. Behavior: Holds one object in each hand.
Materials: Two small rattles or wooden blocks or other hand toys which are similar in size and shape.
Procedure: Place one item in each of the child's hands while child is in a supported sitting position.
Observe: Holds one object in each hand.
Criterion: Child holds one object in each hand for at least five seconds two of three trials.
Scoring: 0 - if child does not hold either object.
1 - if child holds only one object for five seconds or if criterion is not met two of three trials.
2 - if criterion is met.
NA - if child is physically not able to grasp with each hand.

6. Behavior: Pats or feels objects contacted.
Materials: Any small toys or other objects of various shapes or sizes.
Procedure: Place child in sitting position on a mat. Place several objects within the child's reach, using both new and familiar objects. Physically guide the child to make contact with his hand with

one familiar object and say: "Feel the toy." If the child does not pat or feel the familiar object, guide his hand to a new (unfamiliar) object. As the child contacts the object, say: "Feel the _____."

Observe: Pats or feels familiar or unfamiliar object.

Criterion: Child pats 3 times or feels the toy for 10 seconds either an unfamiliar or familiar object two of three trials.

Scoring: 0 - if child withdraws hands immediately after contact with object.

1 - if child grasps object but does not pat or explore.

2 - if criterion is met.

NA - if child is physically not able to grasp and move his arms.

7. Behavior: Searches for dropped object.

Materials: Large (4-10 inches) soundmaking toys which make a loud sound when dropped.

Procedure: Sit the child on the floor or in a low chair on a tile floor. Hand a toy to the child and help him play with it, shaking it and banging it on the floor. Remove the toy from his hands and drop the toy on the floor close to the child on either side of him. Say, "Find the toy" and physically guide him to reach to and pick up the toy. Repeat the procedure and the verbal cue.

Observe: Searches for and picks up the toy.

Criterion: The child will search for and pick up the dropped toy two out of three trials.

Scoring: 0 - if the child does not reach toward the toy.

1 - if the child reaches for the toy but not at criterion level.

2 - if criterion is met.

NA - if child is not able to physically reach and grasp.

8. Behavior: Reaches around barrier to get toy.

Materials: A 12" square piece of cardboard or wood and a soundmaking toy.

Procedure: Let the child play with the toy for a minute. Remove the toy from the child's hands and place it behind the barrier. Sound the toy and continue to sound it. Say the verbal cue, "Find the toy." When the child reaches for the toy and touches the barrier, physically guide the child's hand around the barrier on either side or over the top until he finds the toy. Repeat the procedure giving the verbal cue but no physical assistance.

Observe: Reaches around the barrier and gets the toy.

Criterion: The child reaches around the barrier and gets the toy two out of three days.

Scoring: 0 - if the child does not reach around the barrier.

1 - if the child attempts to go around the barrier but does not find the toy at criterion

level.

2 - if criterion is met.

NA - if child is not physically able to reach and grasp.

9. Behavior: Drops one object to obtain third.

Materials: Three small blocks or other small objects similar in size and shape.

Procedure: Help seated child play with two objects, with the child holding one object in each hand. While the child is actively holding the two objects, present a third object by touching it to the back of one of the child's hands. Say: "Get this toy."

Observe: Drops one object to obtain a third.

Criterion: Child will drop one or both objects to obtain a third object two of three trials.

Scoring: 0 - if child does not drop either of the two objects.

1 - if child drops one or both objects but does not secure third object.

2 - if criterion is met.

NA - if child is physically not able to grasp and release.

10. Behavior: Removes toy from small box with lid.

Materials: Small sound-making toy that makes a continuous sound and a small box. The box requires a lid, and the lid may be hinged or unhinged.

Procedure: Sound the toy. Let the child hold it briefly, then remove it from child's grasp and place it in a small box in front of and within reach of the seated child. The toy should continue to sound after being placed in the box. Immediately place the lid on the box. Say: "Get the toy" and physically guide the child to get the toy. Repeat this procedure without physically guiding the child to obtain the toy.

Observe: Opens the box and grasps the sounding toy.

Criterion: Child opens the box and grasps the toy two of three trials.

Scoring: 0 - if child does not reach and touch box.
1 - if child contacts box but does not obtain toy at criterion level.
2 - if criterion is met.
NA - if child is physically not able to reach and grasp the toy.

11. Behavior: Recognizes the reversal of an object.

Materials: Objects that have one side or end that has a meaningful part for the child (baby bottle, cup, flashlight, bulb, bicycle horn, spoon).

Procedure: Hand the child the toys or object, giving him the end that does not have the meaningful part on it (e.g., the bottom of the bottle). Say the verbal cue, "Use the toy (object)." Physically guide the child to turn the toy or